

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Werner Agne

Serial No.:

09/925,004

Date Filed:

August 8, 2001

Examiner:

Yixing Qin

Group Art Unit:

2622

Title:

**DATA TRANSMISSION SYSTEM HAVING  
DISTRIBUTED CONTROL  
FUNCTIONALITY****MAIL STOP AF**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

I hereby certify that this communication is being deposited with the United States Postal Service as Express Mail No. EV628938947US addressed to: Mail Stop AF, Commissioner for Patents, PO Box 1450, Alexandria, Virginia, 22313-1450, on October 7, 2005.

  
Jason Lee Irby

Dear Sir:

**RESPONSE TO FINAL OFFICE ACTION**

In response to the Final Office Action, mailed August 12, 2005, Applicant respectfully submits the following amendments set forth below and request favorable action thereon.

**Amendment to the Attorney Docket Number** is page 2 of this paper.

**Amendments to the Specification** begin on page 3 of this paper.

**Remarks/Arguments** begin on page 7 of this paper.

EV628938947US

**ATTORNEY DOCKET NO.**

**ATTORNEY DOCKET NO.**

Applicant respectfully requests correction of the Attorney Docket No. in the United States Patent Office records. Please replace with Attorney Docket No. -071308.0171--.

**SPECIFICATION AMENDMENT**

1. Please insert the following paragraph at line [0001], page 1:

--Cross Reference to Related Application

This application claims priority to German application number 101 213 22.0 filed May 2, 2001.--

**CLAIM AMENDMENTS**

**IN THE CLAIMS**

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

- 1-5. (Canceled)
6. (Previously Presented) A data transmission system for use in a machine having a plurality of drive systems, comprising  
a control functional unit associated with each drive system,  
associated control computers linked through a first control network and coupled with said control functional units to perform high level process control;  
a second independent network interconnecting said control functional units for real time cross-communication there between,  
whereby information relating to movement control from any one of said control functional units is simultaneously transmitted to all of the other of said control functional units.
7. (Previously Presented) The data transmission system according to claim 6, wherein the real-time cross-communication can be carried out using Ethernet links.
8. (Previously Presented) The data transmission system according to claim 6, wherein the control functional units can be synchronized by means of Ethernet real-time cross-communication.
9. (Previously Presented) The data transmission system according to claim 6, wherein data and synchronization signals from drive regulators can be interchanged with an associated control functional unit using Ethernet real-time communication.
10. (Previously Presented) The data transmission system according to claim 6, wherein the machine is a printing machine.

11. (Previously Presented) The data transmission system according to claim 6, wherein each drive system comprises a plurality of drive regulators coupled with each respective control functional unit.
12. (Previously Presented) The data transmission system according to claim 11, wherein the drive regulators of one drive system are linked through a third network selected from the group consisting of a ring network, a serial network, and a star network.
13. (Previously Presented) The data transmission system according to claim 12, wherein the third network is a real-time Ethernet network.
14. (Previously Presented) The data transmission system according to claim 6, wherein the first network is used to transmit non-time critical data or parameters.
15. (Previously Presented) A data transmission system for use in a printing machine having a distributed control functionality and a networked complex movement control, comprising:
  - a plurality of drive systems each having a plurality of drive regulators arranged in a group, wherein each drive system comprises an associated control functional unit;
  - a plurality of control computers each coupled through a first control network with an associated control functional unit;
  - a second independent network interconnecting said control functional units for real time cross-communication there between,
  - whereby information relating to movement control from any one of said control functional units is simultaneously transmitted to all of the other of said control functional units through said second network.
16. (Previously Presented) The data transmission system according to claim 15, wherein the real-time cross-communication can be carried out using Ethernet links.
17. (Previously Presented) The data transmission system according to claim 15, wherein data as well as synchronization signals from the control functional units can be exchanged with said drive regulators by means of Ethernet real-time cross-communication.

18. (NEW) A data transmission system for use in a machine having a plurality of drive systems, comprising

a control functional unit associated with each drive system,

associated control computers linked through a control network and coupled with said control functional units to perform high level process control;

an independent Ethernet network interconnecting said control functional units for real time cross-communication there between,

whereby information relating to movement control from any one of said control functional units is simultaneously transmitted to all of the other of said control functional units.

19. (NEW) A data transmission system for use in a printing machine having a distributed control functionality and a networked complex movement control, comprising:

a plurality of drive systems each having a plurality of drive regulators arranged in a group, wherein each drive system comprises an associated control functional unit;

a plurality of control computers each coupled through a control network with an associated control functional unit;

an independent Ethernet network interconnecting said control functional units for real time cross-communication there between,

whereby information relating to movement control from any one of said control functional units is simultaneously transmitted to all of the other of said control functional units through said second network.

**REMARKS**

This Application has been carefully reviewed in light of the Final Office Action mailed August 12, 2005. At the time of the Office Action, Claims 6-19 were pending in this Application. Claims 6-19 were rejected. Applicant added new claims 18 and 19. Claim 18 includes the limitations of independent claim 6 and dependent claim 7, new Claim 19 includes the limitation of independent claim 15 and dependent claim 16. Applicant respectfully requests reconsideration and favorable action in this case.

**Rejections under 35 U.S.C. §103**

Claims 6-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,343,549 issued to Shizurou Tokiwa ("Tokiwa") in view of U.S. Patent 5,947,023 issued to Wolfgang Bohrer et al. ("Bohrer et al."). Applicant respectfully traverses and submits the cited art combinations, even if proper, which Applicant does not concede, does not render the claimed embodiment of the invention obvious.

In order to establish a *prima facie* case of obviousness, the references cited by the Examiner must disclose all claimed limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Furthermore, according to § 2143 of the Manual of Patent Examining Procedure, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

The present independent claims 6 and 15 include the limitation that a second independent network interconnects the control functional units for real time cross communication. In other words the control functional units are able to communicate with each other as disclosed, for example, on page 7, in paragraph [0018]. Tokiwa discloses a rotary printing press that clearly lacks this feature. The Examiner stated that Bohrer discloses this limitation. Applicant respectfully disagrees. Bohrer merely discloses to replace a mechanical synchronization mechanism with an electronic synchronization network.

However, such a network does not allow for any type of communication between functional units. Bohrer does not disclose control functional units but merely a plurality of motors which are controlled by drive unit. All drive units are controlled by two control units 50 and 52. The first network is used for parameterization and the second bus for synchronization. See col. 5, lines 62-66. Thus, unit 50 provides the individual drives with the respective parameter information whereas to assure that all motors are controlled synchronously, the second network 44 provides respective synchronization signals. See, for example, col. 6, lines 45-59.

The present system however provides for second network that interconnects the control functional units. Thus, if a fault within a drive unit occurs, a respective control functional unit can transmit over the second network control signals to all affected drives, for example, to reduce their speed to ensure proper function of the complex system. See in particular paragraphs [0018]-[0020] on page 7 of the present specification. Bohrer merely discloses a passive system in which the different drives merely receive information distributed by a network. Therefore, Applicant believes that even if a person skilled in the art combines Tokiwa and Bohrer which Applicant does not concede, such a combination would clearly not lead to the limitations of the present independent claims.

Applicant respectfully submits that the dependent Claims are allowable at least to the extent of the independent Claims to which they refer, respectively. Thus, Applicant respectfully requests reconsideration and allowance of the dependent Claims. Applicant reserves the right to make further arguments regarding the Examiner's rejections under 35 U.S.C. §103(a), if necessary, and does not concede that the Examiner's proposed combinations are proper. New independent claims 18 and 19 include the limitation that the second network is an independent Ethernet network which is used to ensure the real-time capabilities.

#### **Change of Correspondence Address**

Applicant respectfully requests that all papers pertaining to the above-captioned patent application be directed to Customer No. **31625** and all telephone calls should be directed to Andreas Grubert at 512.322.2545.



**CONCLUSION**

Applicant has made an earnest effort to place this case in condition for allowance in light of the remarks set forth above. Applicant respectfully requests reconsideration of the pending claims.

Applicant encloses a check in the amount of \$200.00 for adding one new independent claim. Applicant believes there are no additional fees due at this time, however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicant's attorney at 512.322.2545.

Respectfully submitted,  
BAKER BOTTS L.L.P.  
Attorney for Applicant



Andreas Grubert  
Limited Recognition No. L0225  
Expires June 30, 2006  
Limited Recognition Under 37 C.F.R. §11.9(b)

Date: October 7, 2005

**SEND CORRESPONDENCE TO:**

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